SMUG BYTES

PRICE
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1987 OFFICERS & WORKING MEMBERS

So You Want To Write A Program!

First we will code the menu function. The necessary items have been described when we layed out the first level of things we want to do within the program. Note the menu program can be used in other programs.

```
  5 REM The menu
 10 BORDER 5: PAPER 5: INK 0: CLS:
LET BRITE=0: LET MENU=10
 20 PRINT AT 5,10;"USE THE 6 OR 7
KEYS FOR ARROW UP OR DOWN
 25 PRINT AT 7,10;"PRESS ENTER
WHEN THE ARROW IS ON THE LINE
WANTED"
 30 FOR N=1 TO 8
 40 LET MENU=MENU+1: GOSUB
600+(N*10): NEXT N: LET MENU=10
 45 LET N=1
 50 IF MENU < 11 THEN LET MENU=18:
LET N=8
 60 IF MENU > 18 THEN LET MENU=11:
LET N=1
 70 PAUSE 10
 80 PRINT AT MENU,2;"=>": LET
BRITE=1: GOSUB 600+(N*10)
 90 IF INKEY$="6" THEN PRINT AT
MENU,0;"  ": LET BRITE=0: GO SUB
600+(N*10): LET BRITE=1: LET
MENU=MENU+1: LET N=N+1: GO TO 50
 100 IF INKEY$="7" THEN PRINT AT
MENU,0;"  ": LET BRITE=0: GO SUB
600+(N*10): LET BRITE=1: LET
MENU=MENU-1: LET N=N+1: GO TO 50
 110 IF CODE INKEY$=13 THEN GO SUB
(1000*N): GO TO 10
 120 GO TO 90
 610 PRINT AT MENU,10;BRIGHT
BRITE;"START A NEW LIST OF NAMES"
 615 RETURN
 620 PRINT AT MENU,10;BRIGHT
BRITE;"UPDATE THE LIST"
 615 RETURN
 630 PRINT AT MENU,10;BRIGHT
BRITE;"SORT THE LIST BY NAME"
 615 RETURN
 640 PRINT AT MENU,10;BRIGHT
BRITE;"SORT THE LIST BY BIRTHDAY"
 615 RETURN
 650 PRINT AT MENU,10;BRIGHT
BRITE;"SEARCH THE DISCRIPTION
AREA"
 615 RETURN
 660 PRINT AT MENU,10;BRIGHT
BRITE;"PRINT MENU"
 615 RETURN
 670 PRINT AT MENU,10;BRIGHT
BRITE;"SAVE THE LIST"
 615 RETURN
 680 PRINT AT MENU,10;BRIGHT
BRITE;"QUIT"
 615 RETURN
```

Taking the Dimension function of the New List function from last month we will code this function. This seems to be at the coding level. Keep in mind we will have to add as we program.

```
1000 REM 100 entries each 70 bytes
long this will be our list
1010 DIM L$(100,70)
1015 REM second sort DIM. This will
be the area for the birthday sort.
Will be 100 entries and 6 bytes
long.
1020 DIM B$(100,6)
1025 REM this will give me two ways
to enter the list.
1030 REM other necessary entries
can be added as needed.
```
Now we will add the areas for the pointer and sort key.
```
1045 REM set the pointer (L) and
the sort key (B).
1050 LET L=0: LET B=0
1990 RETURN
```

Now when the 1000 area is performed the list will be reset and all new entries will be required to rebuild all entries.

"80" NOTES
BY R.A.HILSMANN

As you read this, 1988 should be upon us, hopefully a year that will see a continued flow of new software and peripherals for the Timex & Sinclair Systems.

I will try to add some software via this column to your collection, I'm certain you will find some of them useful.

Lets start with one of the more practical programs, one that has been around for a while, called "VU-FILE" known for it's speed and flexibility. Only one problem, it's written to accommodate only 32 col. printouts! Is it?

Rather then rewriting the code portion, let's examine how it manipulates the printer. Simple, it dimensions a chr$ string called F$ to 32, then writes the data to it, since it is the first variable defined upon running the program, its location is well known.

It would be easy to re-dimension F$ to 80, but the code will continue to write only a maximum of 32 chr$ to it. Now one could change the code of course, so it would write more then 32 chr$ to F$, but there is still the screen, which will only display 32 columns! Lets keep it simple and work with what we've got, let's not do a major re-write of the code (I looked at it, and found it's probably easier to find Timbuktu without a map then to find that portion of code that manipulates F$).

F$ is forwarded to the printer via the LPRINT command, that's easy, so let's just send one F$ after another to the printer, but hold it, F$ is 32 chr$ long (your text and the rest spaces).

We have to print F$ (TO X), which means we have to find out what X is for every string. This is where a 19 byte subroutine located at 28254 decimal comes in. It will check F$ from the last chr$ back to the first chr$ for code greater than 32, if it finds such a chr$ it will then add one space and put the count (X) to location 28286. The space is added, so that if F$ does not contain text, the field will be printed as a blank.

I added a few bells & wistles to the program as well, like automatic Tabsetting, which is done using a search routine which will check each field for lenght of text. It will then give you the tabsetting information on the screen, so that you will be able to set tabs as is, or make any changes you desire. Another feature is automatic printer formating, let's say you have several fields whose combined text-lenght per line is greater then 80 chr$, the program will then automatically switch over to elite, if the text-lenght will exceed 96 chr$ the program will now switch to condensed printing, which will give you as much as 136 chr$ per line.

The programs and code you will find at the following pages where written for the Timex 2068 being in the Sinclair mode, this will give you enough space to add all the extra basic I have added (VU FILE was originally written for the Sinclair). To run the basic in the Timex mode you would have to add VAL "" to numbers, this will slow the program down somewhat, but will leave you with enough memory to use this program in the Timex mode. There also is a poke table on the following pages, which you should poke into memory to make the code functional for the Timex mode.

The code is set up to run printers which need Epson printer codes for elite and condensed printing, look up the codes your printer needs and poke such numbers, if different, to the locations given later. I must point out, that this program is written to run with the OLINGER system and would need a printer-driver to run on other systems, sorry about that, but so much for superior systems.

Now to the laborious part of all this, frankly I'd rather write a program from scratch then to enter one from paper. There is an easy way out, but more about that later.

First thing you would want to do is to set up your disk-drive or tape-deck, now type in the basic program as listed with the 2068 being in the Timex mode, if your saving to tape you should save the program before you enter lines greater than 7000. After you have entered all the lines, run it using GO TO 8000, if saving to disk, save the basic portion now with; CLEAR: SAVE /"vu file" -LINE 10. If you wish to waste memory on your disk or tape, you should next load the screen for VU FILE, break after it has loaded and save it using SAVE /"vu-file"SCREEN$.

Now load in the excisting code for VU FILE to location 28288, enter the next basic program and run it, next save the code using; SAVE /"VU-file"CODE 28254,7250. It should be clear by now that the / after SAVE should be omitted in the program if your saving to tape. Since the second basic program is only a loader program for the code, it need not be saved.

Lets now talk about on how to use the program once you have it all safely tucked away on disk or tape. Load vu file basic as usual and also manipulate the program as usual once loaded, before using the print option you should make sure that all fields are flush left at tab 0, use the "Printer Layout" option at the main menu to accomplish this. Each field has to be at a seperate line.

After returning to the file, press "P" as usual to start printing, you will be asked if your using the 2040 printer at this point, just enter N to print to a centronic type printer. The program will ask you next to press the P key twice, once to get the menu back and once more to start the

file formating routine. Files should start paging on the screen now, checking each for lenght. After the routine has finished, press either the "P" key to leave tabs for each field as they appear on top, or enter tabs for each field, making any changes as you desire. If you wish that a field is not to be printed, enter a negative number like -1. You have to recalculate each following tabsetting if you do so, because each field following is now in a different position.

Make sure you reset the file now before doing a select or a printout.

A few tips on this new way of printing files to paper. When setting tabs different than the computer has figured them, be sure not to overlap the previous field, or the next field will be printed on the next line, this of course could be used to your advantage.

If you like to use titles with your fields, consider using them as headers instead, titles will probably look better as headers anyways. Enter headers as a file, one title for each field. Using the select option, such header can be printed as the first line followed by a manual line feed before selecting the next items to be printed.

Yes the program will give you a chance to use the select option, you will not have to reformat the printer or the files, just keep pressing the P key after selections have been made.

One last item, do not fill all the memory up, leave about 1K for the code I added, there is no way I could protect it. Pressing the I key when in the file menu will tell you how much memory is left.

If you feel that you are to lazy to type all those numbers into memory, relax! This program is available for $5 to club-members, $4 if you get it from me at a meeting,

and bring your own tape or disk.
(OLINGER only please).
Non-members please send $ 7 includ-
ing a note telling me which program
you would like (VFILE+80), and
which system your running,

TO:
IMPEX SOFTWARE
c/o R.A. Hilsmann
P.O. BOX 45
MENOMONEE FALLS, WI. 53051

One thing though, I can only
sell you the additional code and
the new basic program, you would
have to add the original code for
VU FILE yourself. Also you may make
as many copies as you like for your
friends (you would do it anyways),
as long as you dont sell them.
The tape or disk will have both the
Timex & Sinclair version on it.
Disks will only be for quad-density
drives using the OLINGER system
(sorry thats all I have on the
Timex system).

This is the Poke-Table for the
Timex version. POKE:

64528,22	64529,43	64599,215
64701,22	64702,43	65132,22
65133,43	65157,161	65158,49
65169,219	65170,33	65178,242
65183,100	65184,18	65193,48
65194,18	65259,116	65260,46
65279,48	65280,18	

Also change all numbers to
VAL"" for the timex basic version.

POKE LOCATIONS FOR YOUR PRINTER

64901 holds dec. 77 for ELITE
printing. This code is preceeded by
OUT 127,27 followed by OUT 127,77

64925 holds dec. 15 for CONDENSED
printing. Condensed printing
requires only an OUT 127,15 for
Epson printers, should your printer
vary, then poke above locations
with a correct code.

Now enter the programs here and
on the following page.

```
10 CLEAR VAL "28253": DIM f$(V
AL "32"): BORDER SGN PI: PAPER S
GN PI: INK VAL "7": LOAD /"vu-fi
le"SCREEN$ : LOAD /"VU-file"CODE
: LOAD /"vu print"CODE : LET f=
NOT PI: LET a=VAL "28291": GO TO
USR VAL "28288"
1000 CLS : GO SUB VAL "6e3": GO
TO USR a
1010 SAVE /g$CODE s,l: GO TO USR
a
2000 CLS : GO SUB VAL "6e3": GO
SUB VAL "7e3": LOAD /g$CODE s: G
O TO USR a
3000 IF f=1 THEN GO TO 5e3
3010 IF f=2 THEN GO TO 3040
3020 IF f=3 THEN GO TO 4e3
3030 RANDOMIZE USR 64468: LET f=
2: LET i=PEEK 34215: LET n=PEEK
34199*i: LET l=n: DIM k(i): PRIN
T AT 2,0;"Which printer? [    ] Ti
mex? (Y/N)": PAUSE 1: PAUSE 0: I
F INKEY$="y" OR INKEY$="Y" THEN
LET f=1: LET /p=t: GO TO 5e3
3035 LET /p=o/g: PRINT AT 2,0;"P
RESS 'P' TWICE TO CONTINUE ",: P
AUSE 0
3040 RANDOMIZE USR 64532
3090: LET n=n-1: IF n>0 THEN GO
TO USR a
3160 FOR s=1 TO i: INPUT "ENTER
TAB SETTING OR 'P'""-1 TO SKIP
FIELD"' LINE g$: IF g$="p" OR g$
="P" THEN GO TO 3180
3170 LET k(s)=VAL g$: PRINT k(s)
;" "; NEXT s: GO TO 3190
3180 LET h=65308: FOR s=1 TO i:
LET k(s)=PEEK h: LET h=h+2: NEXT
s
3190 PRINT AT 0,0;"BE SURE YOU R
ESET THE FILES"'" THEN DO SELECT
BEFORE PRESSING THE 'P' KEY FO
R PRINTOUT"'"PRESS ANY KEY TO CO
NTINUE NOW",: LET f=3: LET h=1:
PAUSE 4e3: GO TO USR a
4000 RANDOMIZE USR 28254: LET J=
PEEK 28286: IF K(H)<0 THEN GO TO
4020
4010 LPRINT TAB K(H);F$( TO J);
4020 LET H=H+1: IF H=I+1 THEN LE
T H=1
4030 LET l=l-1: IF NOT l THEN LE
T f=0
4040 GO TO USR a
5000 LPRINT f$( TO 32): LET l=l-
1: IF NOT l THEN LET f=0
5010 GO TO USR a
6000 INPUT "Which drive (1 TO 4)
";h: LET /d=h-SGN PI: PRINT '''
"Token CAT for catalog"
6010 INPUT "file name: "; LINE g
$: IF CODE g$=VAL "207" THEN CAT
: GO TO VAL "6010"
6020 LET f$( TO VAL "10")=g$: LE
T s=CODE f$(VAL "11")+VAL "256"*
CODE f$(VAL "12"): LET l=CODE f$
(VAL "13")+VAL "256"*CODE f$(VAL
"14"): RETURN
7000 PRINT '" GO TO USR A TO RET
URN TO VU-FILE": RETURN
8000 RESTORE 9000: LET y=64468
8010 FOR x=y TO y+820
8020 READ l: POKE x,l
8030 NEXT x: PRINT "Insert disk
then press enter": PAUSE 0
8040 SAVE /"vu print"CODE 64468,
820
8050 DELETE 8000,9999
```

```
9000 DATA 205,252,254,33,8,255,3
4,108,92,33,28,255,1,59,0,62,0,2
05,1,255,33
9005 DATA 1,0,34,8,255,33,151,13
3,110,38,0,35,34,10,255,33,167,1
33,110,38,0
9010 DATA 34,12,255,42,10,255,43
,237,91,12,255,205,189,254,34,16
,255,33,88,39,217
9015 DATA 201,205,252,254,33,8,2
55,34,108,92,33,2,0,229,33,0,0,2
09,205,237,254
9020 DATA 205,135,254,30,0,67,10
4,101,99,107,105,110,103,32,97,1
08,108,32,102,105,101
9025 DATA 108,100,115,32,102,111
,114,32,108,101,110,103,104,116,
62,6,215,33,94,110,205
9030 DATA 156,254,68,77,205,82,3
0,33,126,110,110,38,0,34,14,255,
42,14,255,229,42
9035 DATA 8,255,17,28,255,205,17
3,254,209,235,205,112,254,124,18
1,202,139,252,42,8,255
9040 DATA 17,28,255,43,41,25,229
,42,14,255,235,225,115,35,114,42
,8,255,35,34,8
9045 DATA 255,42,8,255,229,42,12
,255,35,209,235,205,121,254,124,
181,202,170,252,33,1
9050 DATA 0,34,8,255,42,16,255,4
3,34,16,255,42,16,255,205,181,25
4,124,181,194,193
9055 DATA 252,33,88,39,217,201,3
0,0,34,18,255,33,0,0,34,20,255
,33,1,0
9060 DATA 34,22,255,229,42,12,25
5,34,24,255,225,195,47,253,42,22
,255,17,28,255,205
9065 DATA 173,254,34,18,255,42,2
2,255,17,28,255,43,41,25,229,42,
20,255,35,235,225
9070 DATA 115,35,114,42,20,255,2
37,91,18,255,25,34,20,255,42,22,
255,17,1,0,205
9075 DATA 121,254,124,181,202,40
,253,42,22,255,17,28,255,43,41,2
5,229,33,0,0,235
9080 DATA 225,115,35,114,42,22,2
55,35,34,22,255,237,91,24,255,23
5,167,237,82,210,222
9085 DATA 252,42,22,255,43,17,28
,255,205,173,254,34,20,255,42,20
,255,237,91,18,255
9090 DATA 25,34,20,255,42,20,255
,17,80,0,205,112,254,229,42,20,2
55,17,97,0,205
9095 DATA 113,254,124,181,209,40
,1,235,124,181,202,138,253,33,12
7,0,229,33,27,0,193
9100 DATA 237,105,33,15,0,205,14
7,254,33,127,0,229,33,77,0,193,2
37,105,42,20,255
9105 DATA 17,96,0,205,112,254,12
4,181,202,162,253,33,127,0,229,3
3,15,0,193,237,105
9110 DATA 42,20,255,17,137,0,205
,112,254,124,181,202,219,253,33,
4,0,229,33,0,0
9115 DATA 209,205,237,254,205,13
5,254,24,0,77,111,114,101,32,116
,104,97,110,32,49,51
9120 DATA 55,32,99,111,108,117,1
09,110,39,115,33,33,62,13,215,33
,0,0,229,33,0
9125 DATA 0,209,205,237,254,205,
135,254,5,0,84,97,98,115,61,33,1
,0,34,22,255
```

```
9130 DATA 229,42,12,255,34,24,25
5,225,195,23,254,42,22,255,17,28
,255,205,173,254,205
9135 DATA 129,254,62,32,215,42,2
2,255,35,34,22,255,237,91,24,255
,235,167,237,82,210
9140 DATA 1,254,62,6,215,205,135
,254,56,0,89,111,117,32,109,97,1
21,32,99,104,97
9145 DATA 110,103,101,32,116,97,
98,45,115,101,116,116,105,110,10
3,115,32,110,111,119,32
9150 DATA 111,114,32,101,110,116
,101,114,32,34,80,34,32,116,111,
32,99,111,110,116,105
9155 DATA 110,117,101,62,6,215,3
3,5,0,205,245,254,33,88,39,217,2
01,235,175,237,82
9160 DATA 103,111,208,44,201,175
,237,82,103,111,192,44,201,205,2
29,254,195,227,45,225,78
9165 DATA 35,70,35,84,93,9,229,1
95,60,32,68,77,253,203,1,174,195
,61,31,68,77
9170 DATA 205,44,22,197,253,33,5
8,92,62,2,205,1,22,225,201,43,41
,25,94,35,86
9175 DATA 235,201,125,180,33,0,0
,192,44,201,62,32,187,56,13,122,
167,32,9,67,235
9180 DATA 108,184,200,25,16,253,
201,77,68,33,0,0,62,15,203,35,20
3,18,48,1,9
9185 DATA 41,61,32,245,178,240,9
,201,175,95,85,76,71,195,182,42,
62,22,215,123,215
9190 DATA 125,215,201,62,23,215,
125,215,215,201,62,2,195,1,22,84
,93,119,19,237,176,201
```

Enter this basic proggram next.
```
   10 RESTORE 100
   20 FOR X=28254 TO 28284
   30 READ L: POKE X,L: NEXT X
   40 PRINT "PRESS ANY KEY TO SAV
E CODE": PAUSE 0: SAVE /"VU-file
"CODE 28254,7250
  100 DATA 229,213,197,245,42,75,
92,17,37,0,25,6,32,126,43,5,254,
32,40,249,4,4,120,50,126,110,241
,193,209,225,201
```

   If you wish to check your data
from line 9000 to 9190 for correct
entry, enter this basic program and
run it using GO TO 9500, before
using GO TO 8000, to enter the code
into memory.
```
9500 RESTORE 9000: LET A=0
9510 FOR X=1 TO 820: READ L
9520 LET A=A+L: NEXT X
9530 IF A<>93059 THEN PRINT "CHE
CK LISTING  FOR ERROR"
9540 IF A=93059 THEN PRINT "DATA
 OK": BEEP 1,1
```
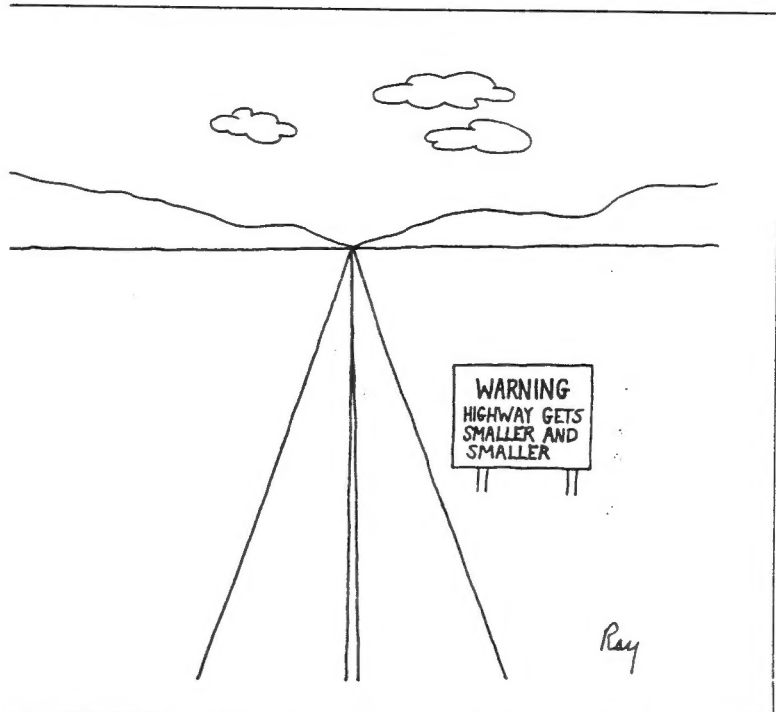
   This is it, I hope you have fun.
In the next issue of this column —

I will try to have VU-CALC+80 all
polished up for you. I like to men-
tion that VU-FILE & VU-CALC are two
programs published by PSION. Also
my apoligies for not giving credit
to Roelof Mulder for using some of
his ideas and small portions of his
original Menu-Loader program in my
version of it.
Sorry about that, so much for being
a novice in writing a column like
this, and trying to meet a dead-
line. When I started writing the
thought was there to give credit to
Mr. Molder and John Oliger, but in
the heat of the battle I forgot.
Anyways my apologies. What bothers
me though is the way this omission
was brought to my attention by MR.
Mulder via the Editor of this News-
letter, totally discrediting my
efforts as having "made a few minor
changes presumably by" me, and so
on. It would certainly help the
Timex-Sinclair community, if such
oversights or any other errors
could be brought to the attention
of writers in a more civilized
manner. Right now I feel like dis-
continuing writing this column, as
well as writing or rewriting any
software for publication, who needs
this.

        Good luck! Enjoy.....
till next month, maybe!
                Rudy Hilsmann.

WARNING
HIGHWAY GETS
SMALLER AND
SMALLER

Ray

Video tapes of the 2nd Annual Midwest Computerfest and the seminars. Prices and listing of the seminars to follow. There is a video of the 1st Annual Midwest Computerfest for $8. This price includes the video tape and shipping. Mention VHS or BETA.

The prices for the 1987 Computerfest are as follows:

The first seminar is $10 this includes tape and shipping. Each seminar after that is $2 up to 5 more seminars. This would be $20 for a group of 6 seminars. Since there are 12 seminars the total cost for all the seminars would be $40. The following are a list of titles available:

"MACHINE CODE FOR THE ZX81"
"DESK TOP PUBLISHING"
"THE FORTH LANGUAGE"
"GRAPHICS ON THE TS2068/SPECTRUM"
"HARDWARE INTERFACING 1"
"HARDWARE INTERFACING 2"
This is Saturday (1) and Sunday (2)
"PRINTER AND PRINTER INTERFACES"
"QL AND SUPERIOR SINCLAIR TECH"
"COMPUSERVE"
"COTTAGE INDUSTRY/ COMPUTER"
"ROUNDTABLE DISCUSSION OF TS TELE"
"COMPUTER LITERACY"

Available through:
    SMUG P.O./Box 101/Butler WI 53007

FROM THE PRES

With this being the annual meeting and elections I would normally mention the list of candidates and wish them luck but since the slate is only those who are already in office it is not necessary. I am sorry that so few of you are interested in the club enough to make an effort to keep it going. I suppose this is not any different than any other club. Well I do want to thank the members who helped the group last year and those helping this year.

Ham and Computer fests comming up
Saturday March 5, MSOE, 1121 N. Milwaukee St. Milwaukee. 8am – 2pm.
Sunday April 10, the Dane County Expo Center, Madison 8am – ?.
Sat. May 7, Circle B Recreation Center, Cedarburg Hy 60 & County I
Saturday May 14, Manitowoc county Expo, Manitowoc 8am – ?

FOR SALE:

If you have anything for sale, you can advertise it for free in this newsletter (provided you're a SMUG member). Our newsletter reaches an ever-growing number of TS User Groups throughout the country, increasing your chances of a sale.

Need any 2 sided double density disks?
I have boxes of 10, still sealed, #1 rated FUJI disks for $6 a box. If you want any call, write or ask me at the meeting.
        Bill Heberlein 5052 N. 91st St.
                Milwaukee, WI   53225

Dr. Lloyd Dreger has his second "Machine Code" book ready. This book takes up where the last one left off. This book will take you deeper into the intricacies of that monster, machine code programming.

The price will be the same as the other book $16.95 (SMUG members $15.00) plus $1.50 S&H.

EDITORS Page? well at least a
paragraph or two

Please notice a new/old advertiser
2nd BYTES. Skip is back and bigger
than ever. The old partners went
out of busines and Skip is running
it by himself. He has some good
hardware deals amd some books and
CPM programs. All at used prices
but good quality.

I subsrcibed to that new TS
newsletter/magazine TS2068 SAFE
DISK UP-DATE. It seems that this
newsletter will be the clearing
point for disk news and information
for all the different disk systems.
There address is 1317 Stratford
Ave. Panama City, FL 32404. It's
cost is $12 per year with 4 issues
per year to start. The idea is to
increase to 6 issues per year if
the subscription rate reaches 300.

LETTERS

Mr. Roelof Mulder from Gatineau
Quebec sent a letter in which he
said the program, in last months
newsletter, was originally written
by him. I talked to R. Hilsmann
about it and he said that he has
never seen the program before but
has seen the Oliger boot program,
didn't care for it and wrote his
own. SMUG Bytes will gladly
recognize the writters of programs
but I feel that Mr. Hilsmann is an
accomplished programmer and he
wrote it from scratch. He may have
been influenced by John Oligers
version of Roelof Mulders program
but there are only so many ways to
write the code. So if there was any
copping it was unintentional and we
do acknowledge Mr. Mulders boot
program.

I also got a letter from John
Sheppard. He likes the information
on the FD68 disk drives and
MSCRIPT. If anyone out there has
any requests please send them to me
and I will respond. Let it be known
that we play requests.